

# Business/Home GSM Alarm system



## Installation and Users' guide

### *Profile*

For a better understanding of this product, please read this user manual thoroughly before using it.

## **I. General information:**

- ◆ GSM 900/1800/1900 bands , can be used all over the world.
- ◆ Full duplex communication with the base.
- ◆ Monitor environment on the spot.
- ◆ Voice and message alert.
- ◆ Set alarm ON or OFF by remote controller.
- ◆ Call in to set alarm ON, OFF , Monitor ,Output.
- ◆ Send SMS to set alarm ON, OFF , Monitor , Output .
- ◆ 5 group phone + room number.
- ◆ 1 group alarm monitor center phone.
- ◆ 2 group phone to report alarm and non-alarm status.
- ◆ Can program 7 group alarm messages.
- ◆ 3 zones for wired detector.
- ◆ 16 zones for wireless detector.
- ◆ Easily set ON or OFF for every wire or wireless detector.
- ◆ 1 relay output to trigger camera when alarm.
- ◆ 2 output for home appliances connection (lamp, cooker, air condition).
- ◆ SMS inform for external power failure or recovery.
- ◆ Indoor and outdoor alarm controller.

## **II. Installation guide:**

### **1. Insert SIM in alarm unit.**

Press the yellow point on the unit with a pencil tip or other tools, SIM tray will come out,

put the SIM into the tray and make sure the Metal contacts of the SIM to be downwards, then push the tray back.

Before insert SIM in alarm unit, using a regular mobile phone do the following steps:

---Set PIN code request to off.

---Delete all stored numbers

## 2. Connect the antenna.

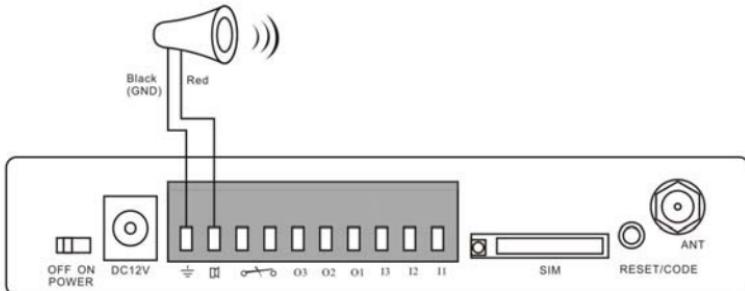
Screw the antenna to the unit carefully, do not over-tighten the nut or leave it too loose!

## 3. Connect the power supply.

which must be 9V—12V DC and over 1000mA current. The signal status LED on the unit will turn red and last for 20 seconds, this shows it waiting for wireless detectors to be coded into the unit, After 20 seconds, the signal status LED will flash in orange, this indicates the unit is checking the SIM card and searching for GSM network. After it finish checking, if the signal status LED changes to slowly flashing in green, it shows phone numbers have been saved in the unit, and the unit is now in “Arm” status .If the signal status LED keeps still in green, this shows phone numbers have not been saved in the unit, and the unit is in “Disarm” status, you can dial in or send SMS to program the phone numbers.

## 4. Connect the siren to alarm system.

Connect the black wire to GND port and the red wire to siren port.



## 5. Connecting wired sensors.

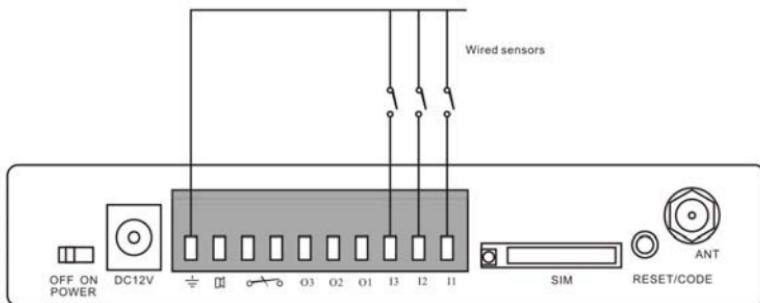
Three inputs are available to connect wired sensors. Inputs are independent and not coded as different zones. When these sensors are triggered, the unit will sent SMS message:

### Wire Activate (1~3).

Sensors can be NO(normally Open) or NC(normally Close) type.

More than 1 sensor can be applied at one input, connecting their alarm contacts serial.

The inputs can be connected with any number of wired sensors, as long as total resistance is under 220 ohms.

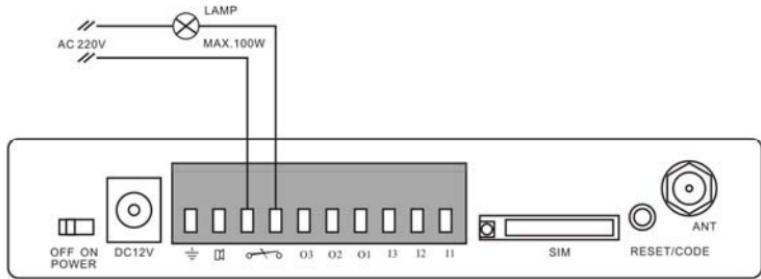


## 6. Connecting switched output devices (Home-appliance Control)

Three open collector outputs (O1, O2 and O3) and one internal relay controlled by telephone are available.

Internal onboard relay is activated when an alarm occurs and can be deactivated / reactivated through telephone commands or SMS text message.

It can be used, as example, to command an external lamp.



Open collector outputs can be used directly if your equipment can operate a relay.

Do connect an antiparallel diode with relay coil.

These outputs can be operated only by telephone or SMS text message commands.

### **Wiring Explanation: For home-appliance control (for special order)**

#### **The controller box has four wires:**

- Two-yellow AC 220 wires to be connected with Home appliance.
- GND, +12V DC wires to be connected with a 12V DC (Power supply)

#### **7. Configuration of the alarm unit:**

There are 10 connect ports at the top side of the unit:

**(GND; SIREN; RELAY1; RELAY2; SPEAKER(O3); O2; O1; I3; I2; I1):**

#### **I1, I2, I3:**

these 3 ports for line input, every port can be connected with ground or open to make alarm out.

**O1; O2:**

these 2 ports for output, you can call in or send SMS to set it . If output of these goes high, the light of OUT 1 or OUT 2 will light on the panel.( **non-professionals should use it with caution!!**)

**SPEAKER(O3):**

this port is for voice output, it can be connected to the speaker. the other port of the speaker connect to ground. you can control it by call in or send the SMS. If this function avails, the light of SPEAKER will light on the panel.

**RELAY1, RELAY2:**

These two ports will close 3 minutes when alarm happens. you can use these two ports to start the power supply of the camera when alarm happens, also you can disable this function by set command 16#1#, you can also make this relay close or open anytime by sending SMS or dialing( 94#1# or 94#0# ).

**SIREN:**

this port can output siren tone alarm, it's to be connected with the siren, the other port of siren connect to ground.

**GND:** power ground.

**III. How can I setup the alarm phone numbers and SMS?**

You can send the message to the unit to setup the 5 groups of alarm phone numbers and 7 kinds of SMS.

The command format : password #operation code # content #

1. Save the alarm phone numbers.

123456#5X# alarm phone numbers #. (X = 1 to 5)

Save 5 group alarm phone numbers into the base.

For example: 123456#**51**# 13905950001#

Save the 1<sup>st</sup> alarm phone number 13905950001 into the base.

2. There are 7 default SMS contents in the base, but you can change it.

When the wireless detector in zone 01 to 05 is triggered, the default SMS content will be: Wireless Activated (X); X can be 01 to 05.

For example:

if detector in zone 01 is triggered the SMS will be:

Wireless Activated (01)

When the wireless detector in zone 06 to 16 is triggered, the default SMS content will be:

Wireless Activated (X); (X=06-16)

When the wire detector is triggered, the SMS message will be:

Wire Activated (X); (X=1-3) , for port 1 to 3 alarm

3. You can send SMS commands to rewrite the above 7 kinds of SMS contents, every SMS cannot excess 24 English characters.

123456#8X# SMS content #. (X = 1 to 5)

For example:

Rewrite the 1<sup>st</sup> SMS content into “Middle door open”:

123456#81#Middle door open#

Rewrite the 6<sup>th</sup> to 16<sup>th</sup> SMS content into “Middle window open”:

123456#86# Middle window open#.

Rewrite the wire detectors SMS content into “Back window open”

123456#87# Back window open#.

#### **IV. How can I test the base alarm?**

When you start the base, if the base is in Disarm status, the signal LED keep still green, you can use controller to change the base into Arm status, or you can send SMS (123456#1#1#) to the base to change the base into Arm status, the signal LED will change to flashing green.

1. Under the Arm status, with green LED on, any port of input (I1, I2, I3) short circuit or disconnected, or any wireless detectors has been activated, or you press the emergency key on the controller ,the alarm system will send alarm information by SMS, and dialing out stored telephone numbers.
2. It will send SMS before dial alarm phone numbers. If the SMS function has been closed or limited, it will only dial out the preset telephone numbers. You can make them disarm with remote controller.
3. When there is alarm, it will dial out phone numbers, you can answer the phone(not need input password )to operate it , press 3# 1# to start the siren and press 3# 0# to stop it; press 4# 1# to listen-in and press 4# 0# to stop it ; press 93# 1# to talk with the spot and press 93# 0# to stop it .
4. When there is alarm, it will dial out phone numbers, you can

answer the phone(not need input password ),if you do not want the unit to dial next phone numbers, just press 1# 1# or 1#2# to re-turn the unit into Arm status.

- When there is alarm, you can use the controller to change the base into disarm status when you are in nearby can control the situation.
- When the external power is cut off, the system will send SMS “**Power changer off**” to inform. When the external power recovered, the system will send SMS “**Power changer on**” to inform .

## **V. How Can I control the base**

- Send message to the host phone number (SIM Card number)

Send message to the unit: password 123456#, add the following commands to control the unit;

- call the host phone number (SIM Card number)

Call in the unit and enter password 123456#, then input the following command to set the base:

### **Commands table:**

<b>Com</b>	<b>Function</b>	<b>Com</b>	<b>Function</b>
1#1#	Out arm* (all detectors work)	1#2#	Home arm (part detectors work)
1#0#	Disarm*(all detectors not work)		
3#1#	Sounding immediately	3#0#	Stop sounding
4#1#	Open listen-in*	4#0#	Closed listen-in

	(use phone key )		(use phone key )
11#1#	Need siren sound when alarming *	11#0#	No siren sound when alarming
12#1#	Sending SMS when alarming *	12#0#	No SMS when alarming
15#1#	Dial phone number when alarming *	15#0#	Just alarm and no dialing
16#1#	Disable Relay close 3 Min when alarming	16#0#*	Set Relay close 3 Min when alarm*
30##	<i>show the arm and disarm status of every zone</i> (SMS command applicable only)		
31#--#	Change password. Enter a new password (1—6 bit).		
38#--#	Set arm of zone (wireless zone: 1—16; wire zone: 21—23) <b>NOTE:</b> to arm each zone		
39#--#	Set disarm of zone (wireless zone: 1—16; wire zone: 21—23) <b>NOTE:</b> to disarm each zone		
50##	<b>show preset phone numbers in the base</b> <i>(SMS command applicable only)</i>		
51#--#	First group phone number(0—15bit)	52#--#	Second group phone number(0—15bit)
53#--#	Third group phone number(0—15bit)	54#--#	fourth group phone number(0—15bit)
55#--#	Fifth group phone number(0—15bit)		
80##	<b>show preset SMS in the host</b>		
81#--#	Wirless zone 01	82#--#	Wirless zone 02

	Message(0-24bit)		Message(0-24bit)
83#--#	Wirless zone 03 Message(0-24bit)	84#--#	Wirless zone 04 Message(0-24bit)
85#--#	Wirless zone 05 Message(0-24bit)	86#--#	Wirless zone <b>I</b> Message(0-24bit)( <b>I=06-16</b> )
87#--#	Wired zone Message(0-24bit)		
90##	<b>Show Output status in the host</b>		
91#1#	Set Output 1 change to high	91#0#	Set Output 1 change to low
92#1#	Set Output 2 change to high	92#0#	Set Output 2 change to low
93#1#	Set talk to the host available (Output 3)	93#0#	Set talk to the host unavailable (Output 3)
94#1#	Set Relay to be connected	94#0#	Set Relay to be disconnected
95#1#	Set alarm when line input 1 open	95#0#	Set alarm when line input 1 connect to Gnd*
96#1#	Set alarm when line input 2 open	96#0#	Set alarm when line input 2connect to Gnd*
97#1#	Set alarm when line input 3 open	97#0#	Set alarm when line input 3connect to Gnd*

**Note:**

1. above table, ' \* ' stand for **default setting**.
2. In the above phone operation, one beep shows your input

successful, a long beep shows the sentence you input is successful, two short beeps shows your input is failed, you should try again.

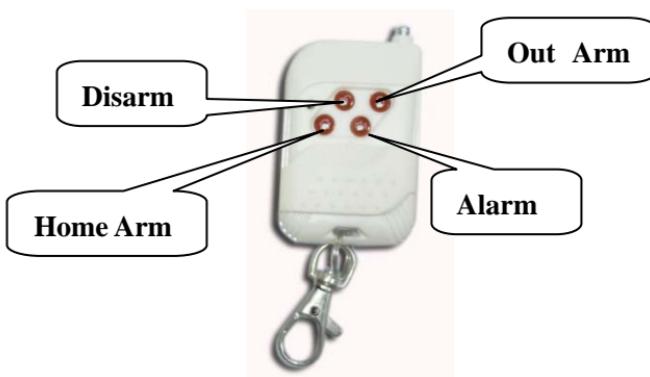
3. In the above SMS operation, you will receive a reply message for confirmation after you send the message command to the base, the replied message as follows:

**DisArm, Sms:ON, Phone:ON,Siren:ON, Center Tel:OFF, Arm Center Tel: OFF , DisArm Center Tel:OFF**

you will know the working state of the base then.(arm, disarm or alarm), if the replied message is the present state of the unit ,you may send wrong message.

4. You also can send the command to check out the present state of the unit.

## **VI. How Can I use controllers**



**The remote controller has four buttons:**

**Out Arm key:**

set alarm works when no one is at home, all the detectors will be in working status, the light on panel will slowly flash green.

**Home Arm key:**

set alarm works when there is someone at home, detectors which inside of the house(in inner defense zone) will not work, only the detectors outside of the house(in outside defense zone) will work, for the people inside can move conveniently, but others who break in from outside will trigger the alarm.

**Disarm key:**

set alarm system disarm, all the detectors are disarmed, the light on panel will keep in still green.

**Alarm key:**

set emergency alarm, the light on panel will flash red, the system will make alarm, and the unit will send the SMS and dial out phone numbers.

## **VII. How can I add more detectors?**

You can add new sensors or detectors, such as wireless door sensors, PIR Sensors, gas and smoke detectors into the unit.

1) Add sensors ready to work when you set both **Out Arm** and **Home Arm**:

When the GSM host begins to be powered on, the status LED light on panel will be red for 20 seconds, this is code learning mode. You can trigger the sensors or detectors, and the red LED will flash to show it is coded successfully into the host.

The coding mode ends 20 seconds later automatically, and system enters into working mode, status LED light on panel will change to yellow, then to green.

2) Add sensors into inner defense zone. (Detectors in this zone are ready to work when you set **Out Arm**, and will not work when you set **Home Arm**

When the GSM host begins to be powered on, the status LED light on panel will be red. Push the reset button for one second, the status LED light will light up in orange for 20 seconds. This is code learning mode of inner defense zone. You can trigger the sensors or detectors, the LED will flash in red to show it is coded successfully into inner defense zone.

For above operation, the host will exit code learning mode 20 seconds later automatically, and enters into working mode, the light on panel changes to orange to search for GSM network, then to green.

**Note:** If there were 4 wireless sensors in the host, stand for zone 1 to zone 4, then the new added sensor will be 5th zone in the host.

## **VIII. How Can I cancel the lost detectors?**

In case of the coded sensors or detectors are lost, you can cancel the coded information of these detectors so that they can not control your alarm system.

Keep pressing the reset button, then power on the system. one beep sound or LED flashes, shows reset is successful. All registered detectors have been deleted from the unit. You can register them again with the above mentioned procedures. System reset will not change the SMS message.

## **SOME NOTES:**

### **1) About (SIGNAL) LED light**

(SIGNAL) light keep in red for 20 second after the unit is powered on, wireless detectors can be coded into the unit, the light flash in red if the coding process successful.

After 20 seconds, (SIGNAL) light flash orange to show it start to search for GSM network, if still flashes in orange, shows SIM card is fixed incorrectly or GSM network is not good.

If (SIGNAL) light keep still in green, shows no phone number stored in SIM card.if every thing is ok,

(SIGNAL) light will flash slowly in green (Out arm mode) or flash quickly in green (Home arm mode) or keeps still on green(Disarm mode);

alarm happens the (SIGNAL) light will flash in red and start to dial out and sent SMS.

### **2) About (OUTPUT) light**

If unit O1 output high(+5V),the OUT 1 light will be on; If unit O2 output high(+5V),the OUT 2 light will be on.

### **3) About (TALK) light (SPEAKER)**

If the unit speaker is in working status,the SPEAKER will be on, shows you can talk to the spot.

### **4) About (RELAY) light**

If 2 outputs of the relay on the unit are connected, the RELAY light will be on.

### **5) About (ALARM) light**

If alarm triggered, the ALARM light will be on.

### **6) About (MONITOR) light**

If the monitor function is opened, the MONITOR light will be on.

### **Basic Kit contains:**

- Alarm system (control unit) – 1 pc.
- Wireless PIR detector – 1 pc.
- Wireless door (gap) sensor – 1 pc.
- Remote controller – 2 pc.
- Antenna – 1pc.
- Mini wired siren 110dB/0.3m – 1 pc.
- Power supply with back-up – 1pc.
- Installation/user manual – 1pc.

### **Standard components and optional available components**

#### **The following sensors can be optional:**

- Additional wireless products



**PIR Detectors**



**Smoke Detectors**



**Panic Buttons**



**Door / Window  
gap sensors**



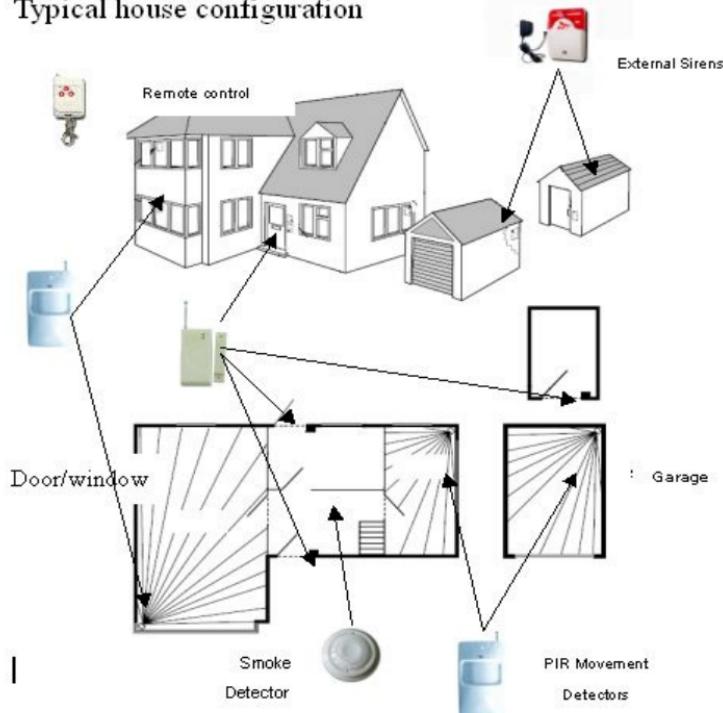
**Remote Controls**



**LPG Gas Detectors**

Optional sensors/detectors are packed separately. It includes remote controllers, wireless PIR, wireless gap sensor, wireless gas detector, wireless smoke detector, panic button, baluster, etc. you may buy according your specific requirements.

### Typical house configuration



## **SOME TECHNIQUE PARAMETER**

### **Main Panel**

Static current:20mA

Power:9V-12V DC

Working temperature:-10°C ~ +85°C

GSM:900/1800/1900MHz band

Receiving code: ASK

Frequency:315/433MHZ

wireless distance: 100 M

wireless detectors:16

wire detectors:3

### **Wireless Gap Detector (Door / Window Contact)**

Power Supply: DC12V (inner 12V battery)

Static Current:  $\leq$ 20 mA

Transmission Current:  $\leq$ 15mA

Transmission Frequency: 315/433MHZ $\pm$ 0.5MHZ

Transmission Distance: No obstacle 80m

Internal Distance: 15 mm

Working Condition: Temperature -10°C ~ + 40 °C

Humidity  $\leq$  90% rh

### **Wireless P.IR Detector**

Power Supply: DC9V (inner 9V battery)

Static Current:  $\leq$ 100 mA

Transmission Current:  $\leq$ 20mA

Transmission Frequency: 315/433MHZ $\pm$ 0.5MHZ

Transmission Distance: No obstacle 80m

Detective Speed: 0.3 - 3m/s

Detective Distance: 5 - 12m

Detective Range: Horizontal 110° Vertical 60°

Working Condition: Temperature  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

Humidity  $\leq 90\text{ rh}$

### **Remote Control**

Power Supply: DC=12V~8.4 (Inside A23 DC=12V dry battery)

Static Current: 11=0

Emission Current:  $12 \leq 15\text{ mA}$

Emission Frequency:  $f=315 \pm 0.2\text{ MHz}$

Emission Speed:  $T \leq 1\text{ second}$

Emission Distance: Without obstruct 80m

Working Environment: Temperature  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

Humidity  $\leq 90\%$

## FAQ:

Symptoms	Causes	Remedies
Cannot alarm by phone	1. Hasn't armed 2. Less than 30 seconds after arming. 3. Set wrong phone num 4. The two parts of door>window sensor is installed too far from each other. 5. Haven't activated PIR. 6. Hasn't checked code	1. Make arming 2. Operate after 30 seconds 3. Set the num again according to the manual 4. Adjust the installation place of the door sensor 5. Activate the PIR 6. Check code again
Remote controlling distance is too short and the light indicator is not on strong enough	1. The battery of remote controller rustily 2. Low battery	1. Clean the rust 2. Change battery
Light indicator of door sensor and PIR is always on.	Low battery	Change battery
Dial alarm num slowly	The main panel has stored others num	Set it again according to the operation manual
The main panel cannot receive accessories signals	Hasn't checked code	1. Check the code again

### Notice:

- Don't install the system beside the strongly disturbing equipments like motor, computer etc.
- Should be installed in a concealed place.
- Should be plug firmly and ensure well dissipation
- Only designed for indoor